

Remarks

Claims 18-20 and 26-36 are currently pending in the Application and Claims 18-20 and 26-28 are withdrawn from consideration by the Examiner.

Telephone conference

Applicant thanks the Examiner and his supervisor for the many courtesies extended during the telephone conference held with Attorney Alex Krayner, and the undersigned, Attorney Robert Popa, on March 29, 2006.

Summary of claim amendments

This response amends Claims 29-30 and 34 to clarify the language of the claims. Support for the amendments can be found, for example, in Figures 2A-5F and on pages 8-18 of the specification. No new matter has been added.

New claims

This response adds new method claims 37-38 that are dependent on device Claims 29 and 33, respectively, to more completely claim the invention. Support for the new Claims 37-38 can be found, for example, in Figures 2A-5F and on pages 8-18 of the specification.

Claim objections

The Examiner asserts that Claims 30 and 34 do not provide sufficient antecedent basis for "the etching rate." Applicant submits that Claims 30 and 34 have been amended and requests that the objection be withdrawn.

35 U.S.C. §112, second paragraph, rejection

Claims 30 and 34 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. According to the Examiner, the structural relationship between the etching rates as recited in Claims 30 and 34 and the claimed device is not clear. Applicant submits that Claims 30 and 34 have been amended and new

Claims 37-38 have been added to clarify the Claims 30 and 34 and request that the rejection be withdrawn.

35 U.S.C. §102(e) Rejection

Claims 29-32 stand rejected under 35 U.S.C. §102(e) as being anticipated by Sah (U.S. Patent No. 6,218,221). Applicant respectfully disagrees.

The Examiner is reminded that “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” MPEP 2131 quoting *Verdegaal Bros. V. Union Oil Co, of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The Examiner is also reminded that “[the] identical invention must be shown in as complete detail as is contained in the ... claim.” MPEP 2131 quoting *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Applicant submits that Sah does not teach each and every element as set forth in the rejected claims. In particular:

Claim 29

A. Applicant submits that Sah does not disclose, suggest or teach, *inter alia*, the following features recited by amended Claim 29 of the present application:

“the first and the second sacrifice layers ... further **separated from the insulating layer in their entirety**” (emphasis added)

The Examiner asserts that “the first and the second sacrifice layers” as recited in Claim 29 is disclosed by Sah’s “layer 48a.” See page 3, line 6 of the Official Action. The Examiner also asserts that “the insulating layer” as recited in Claim 29 is disclosed by Sah’s “layer 44.” See page 3, line 2 of the Official Action. Applicant respectfully traverses the Examiner’s assertion.

According to Sah, a portion of the layer “48a” is in contact with the layer “44.” See Figure 8A of Sah. Therefore, Sah does not teach, disclose or suggest “the first and the second sacrifice layers ... further **separated from the insulating layer in their entirety**” as recited in amended Claim 29. Hence, Claim 29 is patentable

over Sah and should be allowed by the Examiner. Claims 30-32, at least based on their dependency on Claim 29, are also believed to be patentable over Sah.

35 U.S.C. §103(a) Rejection

Claims 33-36 stand rejected under 35 U.S.C. §103(a) as being obvious in view of Sah and further in view of Yang (U.S. Patent No. 5,429,962).

Applicant submits that the Examiner has **not** established a *prima facie* case of obviousness for the claims rejected under 35 U.S.C. §103(a). Applicant notes:

"To establish a *prima facie* case of obviousness, three basic criteria must be met. **First, there must be some suggestion or motivation**, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. **Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.** The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure" (emphases added) *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

A. Applicant submits that a *prima facie* case of obviousness has not been established because the Examiner has failed to show that Sah and Yang teach each and every element as claimed in the present application.

Claim 33

Applicant submits that the Examiner has not shown that Sah and Yang disclose, suggest or teach, *inter alia*, the following features recited by Claim 33 of the present application:

"first and second sacrifice layers"

The Examiner asserts that the "first and second sacrifice layers" as recited in Claim 33 are disclosed by Sah's layers "46a." See page 5, section 6 of the Official Action.

Applicant respectfully traverses the Examiner's assertion and strongly object to the Examiner's inconsistent interpretation of the Sah reference.

The Examiner seems to be using the present claims as a roadmap when rejecting the present claims in view of Sah. Specifically, when rejecting Claim 29, the Examiner specifically asserted that the "first and second sacrifice layers" as recited in Claim 29 are disclosed by Sah's layer "48a" and the "source doped silicon layer" and the "drain doped silicon layer" as recited in Claim 29 are disclosed by Sah's layers "46a." See page 3, lines 3 and 6 of the Office Action.

However, when rejecting Claim 33, the Examiner asserts that the "first and second sacrifice layers" as recited in Claim 33 are disclosed by Sah's layers "46a" which were according to the Examiner also the "source doped silicon layer" and the "drain doped silicon layer" as recited in Claim 29. See page 5, section 6, line 7 of the Office Action. How can Sah's layers "46a" be both the "source doped silicon layer," the "drain doped silicon layer" as recited in Claim 29 and the "first and second sacrifice layers" as recited in Claim 33?

When rejecting the pending claims, Applicant respectfully requests that the Examiner does not use the pending claims as a roadmap when referring to the Sah reference and that the Examiner be consistent in his interpretation of the Sah reference.

Applicant submits that the Examiner has not shown that Sah discloses, suggests or teaches "first and second sacrifice layers" as recited in Claim 33, because Sah's layers "46a" can not be both the "source doped silicon layer," the "drain doped silicon layer" as recited in Claim 29 and the "first and second sacrifice layers" as recited in Claim 33. Hence, Claim 33 is patentable over Sah and Yang and should be allowed by the Examiner. Claims 34-36, at least based on their dependency on Claim 33, are also believed to be patentable over Sah and Yang.

B. Applicant submits that a *prima facie* case of obviousness has not been established because there is no motivation in the prior art to combine the cited references as asserted by the Examiner.

Applicant respectfully submits that there is no suggestion or motivation in either Sah or Yang for their combination and how the features of the two devices could be combined so as to meet the structure as claimed in the present application. It has been found that “when the incentive to combine the teachings of the references is not readily apparent, it is the duty of the examiner to explain why combination of the teachings is proper. ... Absent such reasons or incentives, the teachings of the references are not combinable” *Ex parte Skinner*, 2 USPQ2d 1788 (B.P.A.I. 1986). Applicant submits that the Examiner’s combination of Sah and Yang is based upon a hindsight reconstruction of Applicant’s claims as opposed to what the references really suggest.

Sah discloses a transistor with a multi-metal structure as source and drain electrodes wherein, as conceded by the Examiner, source/drain layers are identified by reference number “46a.” See page 3, line 3 of the Office Action and column 1, lines 5-10 of Sah. Yang discloses, as asserted by the Examiner, a source/drain electrode stack. See page 5, last two lines of the Office Action.

The Examiner asserts that it “would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the source/drain stack taught by Yang in the structure of Sah in order to control and reducing contact resistance.” See page 6, lines 3-5 of the Office Action.

Applicant submits that one skilled in the art would not find any suggestion or motivation in the cited references as a whole to combine or modify the two devices disclosed in the cited references to meet the structure as claimed in the present application.

Because Sah provides a transistor that already has source/drain layers, where is the suggestion or motivation in the cited references to incorporate the source/drain stack taught by Yang in Sah's transistor that already has source/drain layers? One skilled in the art would not try to add additional source/drain layer from Yang to a transistor that already has source/drain layers. Applicant submit that the only reason these references were cited was because the Examiner used the present claims as a road map.

As stated by the Federal Circuit: "[i]t is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious. One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to depreciate the claimed invention." *In re Fritch*, 972 F.2d 1260. Therefore, Applicant submits that the Examiner has failed to establish a *prima facie* case of obviousness for the claims rejected under 35 U.S.C. §103(a) and Applicant respectfully requests that the rejection be withdrawn and claims allowed.

C. Applicant submits that, even if it was possible to somehow combine the cited references, there is no evidence that the modified device would be satisfactory for its intended purpose.

According to MPEP §2143.01, if "proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)."

The Examiner states that it "would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the source/drain stack taught by Yang in the structure of Sah in order to control and reducing contact resistance." See page 6, lines 3-5 of the Office Action. Applicant respectfully traverses the Examiner's statements.

Sah provides a transistor that already has source/drain layers. By placing Yang's source/drain stack into Sah's transistor, one skilled in the art would cause Sah's transistor to have multiple source/drain layers there by reducing Sah transistor's intended performance. Reducing the intended performance of the Sah's transistor would render Sah's invention unsatisfactory for its intended purpose.

Applicant submits that the Examiner has failed to establish a *prima facie* case of obviousness for the claims rejected under 35 U.S.C. §103(a). Therefore, Applicant respectfully requests that the rejection be withdrawn and claims allowed.

Conclusion

In view of the above, reconsideration and allowance of all the claims are respectfully solicited.

The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to deposit account no. 12-0415. In particular, if this response is not timely filed, then the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR 1.136 (a) requesting an extension of time of the number of months necessary to make this response timely filed and the petition fee due in connection therewith may be charged to deposit account no. 12-0415.

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(Date of Deposit)

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